



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,862	02/10/2004	Mary Chen	B-4967NP 621679-8	3881
36716	7590	06/09/2006	EXAMINER	
LADAS & PARRY 5670 WILSHIRE BOULEVARD, SUITE 2100 LOS ANGELES, CA 90036-5679			JACKSON JR, JEROME	
			ART UNIT	PAPER NUMBER
			2815	
DATE MAILED: 06/09/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

51

<b>Office Action Summary</b>	<b>Application No.</b> 10/776,862	<b>Applicant(s)</b> CHEN, MARY	
	<b>Examiner</b> Jerome Jackson Jr.	<b>Art Unit</b> 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.  
4a) Of the above claim(s) 13-25 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-12, 26 and 27 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 2815

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-12, 26 and 27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Enquist '880, of record.

The previous rejection still applies.

Claims 1-12, 26 and 27 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yanagisawa, of record.

The previous rejection still applies.

The declaration filed on 3/31/06 under 37 CFR 1.131 has been considered but is ineffective to overcome the Yanagisawa reference.

The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Yanagisawa reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897). There is no submitted "Inventive Disclosure" (10 pages) as alleged in the declaration. It is mere speculation to comment on any actual reduction to practice.

The evidence submitted is also insufficient to establish diligence from a date prior to the date of reduction to practice of the Yanagisawa reference to either a constructive reduction to practice or an actual reduction to practice. Initially, the invention disclosure (which was not apparently submitted) may show conception, but apparently not an

Art Unit: 2815

actual reduction to practice. There is no showing of diligence from the alleged conception to an actual reduction to practice or to the constructive reduction to practice (filing date 8/12/03). In other words applicant needs to show what happened from November 1, 2002 to August 12, 2003 to prove "diligence". There is presently no showing of diligence.

Applicant's arguments filed 3/31/06 have been fully considered but they are not persuasive. Applicant argues region 15a is not an emitter ledge. This is not persuasive because 15a is a thin part of the emitter that is fully depleted by the base layer adjacent it. Ledge 15a anticipates the ledge of the claim because layer 15a can be described as comprising a thin slice of emitter 15 across the entire length of 15. The terms "extrinsic", "intrinsic", "ledge", etc. are mere labels which do not structurally distinguish over Enquist which can be labeled in the same manner. In regard to the functional language, See In re Swinehart 169 USPQ 226, Ex parte Minks 169 USPQ 120 and In re Pearson 181 USPQ 641 where it was decided that functional language, statements of intended use, or mere labels do not structurally distinguish claims over anticipating prior art.

Applicant's claim 1 does not specifically distinguish by exact material composition layer structure any concrete material differences between "extrinsic", "intrinsic" or "ledge". Hence they are mere labels not structurally distinguishing over the applied art as shown above. Enquist shows a "ledge" layer 15a which additionally is likewise labeled "ledge" and is depleted by the underlying base layer doping. There is necessarily a "depletion" layer in both the base and adjacent layer 15a. Layer 15a, due to its minute thickness, is fully depleted of carriers.

Arguments regarding “the same layer” are unpersuasive of patentability because claim 1 does not specifically recite any material layer differences between the ledge and emitter which would unequivocally distinguish over Enquist. Applicant is reading the claim language too narrowly. Note also that all the device regions are comprised of layer upon layer of atoms. Also the various regions can be arbitrarily described as comprising sections of “layers”. The claims are not specific enough to structurally distinguish over the applied art.

Arguments regarding layer 15a of Enquist not being fully depleted are wrong. The layer must be fully depleted as stated in the patent or else the device would not work properly. There would be a short from the emitter to base and non-negligible current might flow. See the description in column 6 where the ledge 15a is thin enough to be fully depleted in order that “negligible” current flows.

In regard to Yanagisawa see the remarks above on the insufficient declaration.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2815

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Jackson Jr. whose telephone number is 571-272-1730. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jj

  
JEROME JACKSON  
PRIMARY EXAMINER